

MSE-4

Topic - Heart beat

Heartbeat is the rhythmic contraction and relaxation of the heart that pumps blood throughout the body

Normal rate - 72 beats per minute.

Cardiac cycle (one heart beat)

Duration - 0.8 second

1. Atrial Systole (0.1 sec)

- 7 Atria contract
- 7 Blood flow from atria → ventricles.
- 7 AV valve open
- 7 Semilunar valve open.

2. Ventricular Systole (0.3 sec)

- 7 Ventricle contract
- 7 AV valve close → 1st heart sound (Lub)
- 7 Semilunar valve open
- 7 Blood pumped into :- aorta and pulmonary artery.

3. Ventricular Diastole (0.4 sec)

- 7 Ventricle relax
- 7 Semilunar valve close - 2nd heart-sound (Dub)
- 7 AV valve open
- 7 Ventricle fill with blood

Teacher's Signature : _____

Control of Heart beat

Pacemaker — SA node

- 7 Located in right atrium
- 7 Initiates heartbeat
- 7 produces rhythmic electrical impulses

Nervous Control

Sympathetic nerves — Increase heart rate

Parasympathetic nerves — Decrease heart rate

Hormonal Control

- 7 Adrenaline increases heart rate
- 7 thyroxine increases cardiac activity

Conclusion: —

- 7 Coronary Circulation nourishes the heart
 - 7 Heartbeat maintain blood flow
 - 7 proper functioning ensure survival
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CARDIAC CYCLE

